Applicant : Jonathan Yen et al.
Serial No. : 09/728, 297
Filed : December 1, 2000
Page : 2 of 15

Attorney's Docket No.: 10004274-1
Amendment dated July 13, 2004
Reply to Office action dated April 22, 2004

Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (previously presented): A machine-implemented method of generating a payment indicium, comprising:

generating a corroborative digital token from payment information; and

modulating a base image with a graphical encoding of the corroborative digital token to produce a payment indicium by

dividing the base image into multiple image areas,

segmenting image areas into multiple groups based on pixel values in the image areas, and

encoding the segmented image areas with sets of two-dimensional code patterns to graphically encode the corroborative digital token in the payment indicium, wherein each set of code patterns encodes a respective corresponding group of image areas.

Claim 2 (original): The method of claim 1, wherein the payment information from which the corroborative digital token is generated includes an indication of payment amount.

Claim 3 (original): The method of claim 1, wherein the payment information from which the corroborative digital token is generated includes postal data.

Claim 4 (original): The method of claim 3, wherein the postal data includes destination address information.

Claim 5 (original): The method of claim 1, wherein the base image includes a user-selected image.

Applicant : Jonathan Yen et al.   Attorney's Docket No.: 10004274-1
Serial No. : 09/728, 297   Amendment dated July 13, 2004
Filed : December 1, 2000   Reply to Office action dated April 22, 2004
Page : 3 of 15

Claim 6 (original): The method of claim 1, wherein the corroborative digital token is generated from a cryptographic transformation of the payment information.

Claim 7 (previously presented): The method of claim 1, wherein the image areas to be encoded are segmented into multiple halftone groups based on gray level values in the images to be encoded, and the segmented image areas are encoded with respective corresponding sets of two-dimensional, coded halftone patterns.

Claim 8 (previously presented): A data processing system for generating a payment indicium, comprising an encoder configured to:

generate a corroborative digital token from payment information; and

modulate a base image with a graphical encoding of the corroborative digital token to produce a payment indicium by

 dividing the base image into multiple image areas,

 segmenting image areas into multiple groups based on pixel values in the
  image areas, and

 encoding the segmented image areas with sets of two-dimensional code
  patterns to graphically encode the corroborative digital token in the
  payment indicium, wherein each set of code patterns encodes a
  respective corresponding group of image areas.

Claim 9 (previously presented): A machine-implemented method of extracting payment information from a payment indicium, comprising:

extracting a digital token from a payment indicium based upon a comparison of the payment indicium and a base image;

decoding the extracted digital token to produce a decoded message; and

extracting from the decoded message payment information encoded in the payment indicium.

Claims 10-14 (canceled)

Applicant : Jonathan Yen et al.
Serial No. : 09/728, 297
Filed : December 1, 2000
Page : 4 of 15

Attorney's Docket No.: 10004274-1
Amendment dated July 13, 2004
Reply to Office action dated April 22, 2004

Claim 15 (previously presented): A machine-implemented method of generating a payment indicium, comprising:

selecting at least one encoding level based on a payment value specified in the payment information;

encoding payment information into a corroborative digital token with the at least one selected encoding level; and

rendering a payment indicium containing the encoded payment information.

Claim 16 (original): The method of claim 15, wherein one or more of the encoding parameters vary with payment value.

Claim 17 (original): The method of claim 16, wherein an encoding security level parameter varies with payment value.

Claim 18 (original): The method of claim 17, wherein an encoding private key bit length parameter varies with payment value.

Claim 19 (previously presented): The method of claim 16, wherein an encoding robustness level parameter varies with payment value.

Claim 20 (original): The method of claim 19, wherein an error correction code redundancy parameter varies with payment value.

Claim 21 (previously presented): The system of claim 8, wherein image areas to be encoded are segmented into multiple halftone groups based on gray level values in the images to be encoded, and the segmented image areas are encoded with respective corresponding sets of two-dimensional, coded halftone patterns.

Claim 22 (canceled)

Claim 23 (currently amended): A machine-implemented method of generating a payment indicium with a printer of a particular type, comprising:

Applicant : Jonathan Yen et al.
Serial No. : 09/728, 297
Filed : December 1, 2000
Page : 5 of 15

Attorney's Docket No.: 10004274-1
Amendment dated July 13, 2004
Reply to Office action dated April 22, 2004

generating a corroborative digital token from payment information;

dividing a base image into multiple image areas;

segmenting image areas into multiple groups based on pixel values in the image areas;

encoding the segmented image areas with sets of two-dimensional code patterns to graphically encode the corroborative digital token in the payment indicium, wherein each set of code patterns encodes a respective corresponding group of image areas ~~The method of claim 22~~, wherein image areas to be encoded are segmented into multiple halftone groups based on gray level values in the images to be encoded, and the segmented image areas are encoded with respective corresponding sets of two-dimensional, coded halftone patterns;

identifying the type of the printer;

setting the printer to a printing resolution based on the identified type of the printer; and

printing the payment indicium containing embedded payment information on a printing surface with the printer set to the selected printing resolution.

Claim 24 (previously presented): The method of claim 15, further comprising:

dividing a base image into multiple image areas;

segmenting image areas into multiple groups based on pixel values in the image areas; and

encoding the segmented image areas with sets of two-dimensional code patterns to graphically encode the corroborative digital token in the payment indicium, wherein each set of code patterns encodes a respective corresponding group of image areas.

Claim 25 (previously presented): The method of claim 24, wherein image areas to be encoded are segmented into multiple halftone groups based on gray level values in the images to be encoded, and the segmented image areas are encoded with respective corresponding sets of two-dimensional, coded halftone patterns.

Claim 26 (new): The method of claim 1, wherein encoding the segmented image areas comprises converting at least one of the image areas to a respective barcode matrix corresponding to a symbol in the digital token and contained in one of multiple predetermined barcode matrix sets selected based on pixel values in the image region being

Applicant : Jonathan Yen et al.
Serial No. : 09/728, 297
Filed : December 1, 2000
Page : 6 of 15

Attorney's Docket No.: 10004274-1
Amendment dated July 13, 2004
Reply to Office action dated April 22, 2004

converted, wherein each barcode matrix set includes a respective barcode matrix for each possible symbol in the digital token, and barcode matrices in different sets encoding a common message symbol have different respective spatial patterns of dots selected from a set of different color dots.

Claim 27 (new): The method of claim 22, wherein encoding the segmented image areas comprises converting at least one of the image areas to a respective barcode matrix corresponding to a symbol in the digital token and contained in one of multiple predetermined barcode matrix sets selected based on pixel values in the image region being converted, wherein each barcode matrix set includes a respective barcode matrix for each possible symbol in the digital token, and barcode matrices in different sets encoding a common message symbol have different respective spatial patterns of dots selected from a set of different color dots.

Claim 28 (new): The method of claim 24, wherein encoding the segmented image areas comprises converting at least one of the image areas to a respective barcode matrix corresponding to a symbol in the digital token and contained in one of multiple predetermined barcode matrix sets selected based on pixel values in the image region being converted, wherein each barcode matrix set includes a respective barcode matrix for each possible symbol in the digital token, and barcode matrices in different sets encoding a common message symbol have different respective spatial patterns of dots selected from a set of different color dots.